Rishav Mishra

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EDUCATION

National Institute of Technology, Durgapur, India — Sep 2021 - May 2025

WORK EXPERIENCE

Cisco Systems India Pvt Ltd - Software Engineer (Full-Time) — Aug 2025 - Present

- Set up AI harnesses for around 5 repositories (Agents.md, apm, guardrails) and incorporated Spec-Driven Development (SDD) into my workflow respecting the AI-Native Engineering Principles.
- Diagnosed the root cause of 50,000 missing quote lines out of 200,000 processed daily and restored MongoDB-to-Oracle Reverse Sync for downstream quoting systems.
- Delivered ASTQ SOW integration by adding a quote-review template questionnaire and passing sowSys to /ASPTRESTService/getQuoteDetails, enabling CDM-based document generation for partners.
- Resolved Mongo Archive and Trust Commerce incidents, including post-upgrade event failures, and reduced around 1,000 daily Forbidden User exception entries in Splunk.

HackerEarth - Technical Engineer - Problem Setter (Programming) Intern — Jan 2025 - July 2025

- Developed and tested advanced DSA problems covering Segment Trees, DP, Graphs and Trees for hiring challenges (Toast, Meesho, etc.), with multilingual test infrastructure across C++, Java, Python, Go, C and other languages.

PROJECTS

Advanced Lazy Segment Tree[Link] — Sep 2023 - Oct 2023

C++ | Data Structures | Algorithms | Scientific Computation

- Implemented an efficient **Segment Tree with Lazy Propagation** to support optimised range updates and queries on large datasets.
- Designed custom **Info** and **Tag** structures to support flexible data storage and update operations, including sums, maximum/minimum queries, increment operations, and value assignments.
- Applied advanced data structures and algorithmic techniques to build a flexible and reusable C++ solution.

COMPETITIVE CODING PROFILE AND ACHIEVEMENTS

- A+ grade in Advanced Algorithms in NIT DGP.
- Achieved Specialist status in Codeforces (1500+)
- Attained 4-star rating in Codechef (1800+)
- Ranked 744 in ICPC India Preliminary 2023.

SKILLS

- **Programming Languages:** C++, Java, C, Python
- **Core Computer Science:** Data Structures, Algorithms, OOPs, Problem Solving, Compiler Design.
- **Backend & Software Development:** Spring Boot, REST APIs, Microservices
- **Databases:** MongoDB, Oracle
- **Development & Debugging:** Incident Debugging, Root Cause Analysis, Splunk
- **AI Native:** Spec-Driven Development, AI-Harness Setup (Agents.md, apm, guardrails).